

REMARKS/ARGUMENTS

Status of Claims

Claims 10, 14-19 and 23-30 are pending in the application, with claims 10, 19 and 28 being the only independent claims. Claims 1-9 have been previously cancelled without prejudice or disclaimer. Claims 10, 17-19, and 25-28 have been amended to remove informalities indicated in the Office Action without narrowing the scope of any claims or any elements contained therein. New claims 29 and 30 have been added, as suggested by the Examiner, to recite additional features shown in Fig. 1.

No new matter has been added.

Summary of the Office Action

Claims 17-18 and 25-28 have been rejected under 35 U.S.C. § 112, second paragraph.

Claims 10, 14-19 and 23-27 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Kabout (US 5,712,516) in view of Karita (US 4,876,765) and Tucker (US 3,105,272).

Claim 28 has been rejected under 35 U.S.C. § 103(a) as unpatentable over Kabout in view of Karita.

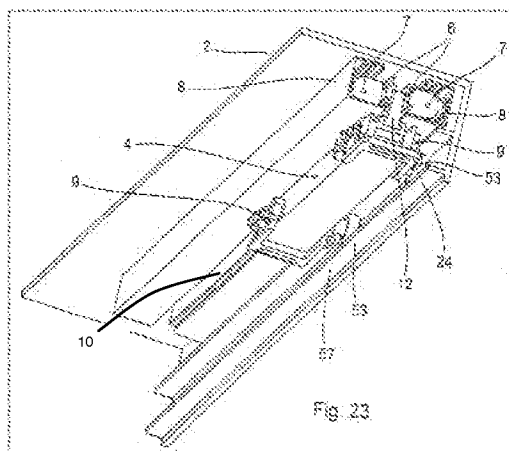
Subject Matter Described in the Specification

The following descriptive details are based on the specification. They are provided only for the convenience of the Examiner as part of the discussion presented herein, and are not intended to argue limitations which are unclaimed.

The present application discloses a linear drive arrangement for a sliding door in which a drive carriage of a sliding door 5 is movable by a linear drive 1 and the sliding door 5 is suspended by a magnetic force of the linear drive 1. The linear drive 1 includes a stationary guide rail 3 mounted in a holder 2 (see Fig. 1 and para. [0017] of the original specification). The

guide rail 3 includes C-shaped slide rails 6 which are spaced apart with their open sides facing away from one another (see para. [0018] and Fig. 1). Coils 7 are arranged on oppositely facing open sides of the C-shaped slide rails 6 (see para. [0018] and Fig. 1).

The linear drive 1 also includes a guide carriage 4, which is displaceable in the guide rail 3 (see para. [0017] and Fig. 1) and carries the sliding door 5 to be movable in the direction of the guide rail 3. A portion of the guide carriage 4 is located between the slide rails 6. The guide carriage 4 includes a supporting rail 10 connected to a holding member 12 (see para. [0019] and Fig. 2). Magnets 13 are received in the holding member 12 and cooperate with the coils 7 to form a holder and a drive for the sliding door 5 (see para. [0019]).



At least one supporting roller 53 is provided to support the guide carriage 4 on a guide track 57 when the guide carriage 4 is not fully suspended by the magnetic force, i.e., at the beginning and end of movement of the guide carriage 4 (see Fig. 23).

Amendments Addressing Informalities

Claims 10, 17-18, and 25-28 have been amended to address the informalities indicated on page 2 of the Office Action. In addition, claim 19 has been amended similarly to claim 10. These above amendments have been made to further clarify the subject matter of the claimed invention without introducing new matter.

In view of the above amendments, the rejections under 35 U.S.C. § 112 should now be withdrawn.

Patentability of the Invention

A. Legal Principle

As stated in MPEP § 2143, citing *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385 (2007), when a rejection is made combining prior art elements, the Examiner must articulate: (1) a finding that the prior art included each element claimed, although not necessarily in a single prior art reference, with the only difference between the claimed invention and the prior art being the lack of actual combination of the elements in a single prior art reference; and (2) a finding that one of ordinary skill in the art could have combined the elements as claimed by known methods, and that in combination, each element merely performs the same function as it does separately.

Moreover, the mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims on appeal is not by itself sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of appellant's specification, to make the necessary changes in the reference device. *Ex parte Chicago Rawhide Mfg. Co.*, 223 USPQ 351, 353 (Bd. Pat. App. & Inter. 1984). See, also, MPEP § 2144.04(VI)(C).

Furthermore, if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). See, also, MPEP § 2143.01(V).

B. Independent Claim 10 is Allowable

Independent claim 10 recites, *inter alia*, “two supporting rollers supported at least at times on said guide track.”

The Office Action acknowledges that “Kabout is silent concerning a supporting roller which supports the guide carriage on the guide track” (see, page 4 of Office Action). The Office Action however cites Karita’s rollers 121 and Tucker’s studs 36 to remedy Kabout’s deficiencies. Applicants disagree because:

(i) the proposed combination of Karita’s guiding rollers 121 with Kabout’s guide carriage requires substantial reconstruction of the elements in Kabout’s door drive which renders Kabout inoperable for its intended purpose and is thus not obvious;

(ii) the reason asserted by the Office Action to combine Karita’s guiding rollers 121 in Kabout contradicts to the explicit teachings in Karita; and

(iii) there is no reason to combine Karita’s guiding rollers 121 in Kabout as Kabout teaches a guide wheel 12 for such guiding purpose.

(i)

The proposed combination of Karita’s guiding rollers 121 with Kabout’s guide carriage requires more than a mere addition of Karita’s rollers 121. Rather, a substantial reconstruction of the elements in Kabout’s door drive is required, which renders Kabout inoperable for its intended purpose and is thus not obvious.

Kabout teaches a door suspension/drive arrangement including a plurality of magnets 10 mounted inside a profile in a lintel 2 on top of a door panel 1. A stator element 15 is mounted on a guide strip 11 and interacts with the magnets 10 to both suspend and drive the door panel 1. Guide wheels 12 are provided on the door panel 1 running in a guide 14 on the guide strip to guide the door panel 1 during door opening/closing operation.

As applicants previously submitted, since the stator element 15 is arranged in a profile 19 in the lintel 2 of the door frame, no part of Kabout’s stator element 15 can be modified to include

Karita's roller 121 or roller arrangement. For example, the guide plate 11 (interpreted by the Office Action as the claimed guide track) in the stator element 15 is entirely encased by both the resin 20 and the profile 19 (see, col. 2, ll. 44-46 and Fig. 2 of Kabout). Consequently, the longitudinal edges of the guide plate 11 are not accessible or otherwise contacted by Karita's rollers 121, even if Karita's rollers 121 can be combined into Kabout as suggested in the Office Action. Accordingly, mere combination of Kabout and Karita, as suggested in the Office Action, do not teach independent claim 10.

In response to the Examiner's comments in the Response to Arguments section (see page 6 of the Office Action), applicants submit that such comments, in fact, support applicants' position that additional reconstruction of Kabout is required for the proposed combination of Kabout and Karita to operate properly. For example, both the profile containing the magnets 10 must be widened and the resin 20 and profile 19 must be removed to expose the longitudinal edges of the guide plate 11, to allow Karita's rollers 121 be supported the longitudinal edges of the guide plate 11 as intended by the proposed combination. Without such reconstruction, Karita's rollers 121 will prevent Kabout's stator element 15 and magnets 10 from cooperating with each other to suspend and drive the door panel 1. Consequently the mere combination of Kabout and Karita fails to teach or suggest the claimed invention. The above reconstruction renders Kabout inoperable for its intended purpose because the profile 19 would be removed and a portion of the stator element 15 would be exposed out of the lintel 2.

Accordingly, independent claim 10 is not obvious over Kabout and Karita under MPEP §2143.01(V). The Office Action thus fails to establish a *prima facie* obviousness case against independent claim 10 for at least the above reasons.

(ii)

In support of the proposed combination of Karita's rollers 121 in Kabout, the Office Action asserts that the proposed combination would "enable a user to move the door when the linear drive does not have power" (see page 4 of the Office Action). Such finding made in the Office Action, however, contradicts to the explicit teachings of Karita.

Karita teaches a door support, in which magnets 131, 132 cooperate with a guide member 105 to suspend the door 1. Rollers 121 are provided in rolling contact with the stepped portions 108, 109 of the guide member 105 to position the guide member 105 between the two sets of rollers 121 (see col. 3, ll. 50-51 and 54-55 of Karita).

There is no teaching that the rollers 121 in Karita are used to allow a user to move the door when the linear drive is out of power, as is suggested in the Office Action. In fact, Karita explicitly teaches that the rollers 121 are subjected to extremely small load (see col. 4, ll. 14-15). In view of the above teachings of Karita, one skilled in the art will appreciate that rollers 121 are not intended to suspend the door panels, but to guide the door panels during the door operation. Accordingly, the above finding made in the Office Action contradicts to the explicit teachings of Karita.

Without finding any reason to support the proposed combination of Karita and Kabout, the Office Action fails to establish a *prima facie* obviousness case against independent claim 10 for the above additional reasons.

(iii)

There is no reason to combine Karita's guiding rollers 121 in Kabout because Kabout teaches guide wheels 12 for such guiding purpose.

As one skilled in the art will appreciate, Kabout already employs guide wheels 12 in the door suspension/drive arrangement to perform a similar guiding operation as Karita's guiding rollers 121. Accordingly, there is no reason to include Karita's guiding rollers 121 in Kabout, as suggested in the Office Action, to either substitute or add to Kabout guide wheels 12 to perform the same operation.

Therefore, independent claim 10 is not obvious over Karita and Kabout for the above additional reasons.

Tucker was cited in the Office Action against the claim features concerning the bearing shaft and do not cure the above deficiencies of Kabout and Karita. In view of all the above, independent claim 10 patentably distinguishes over the cited art and is thus allowable.

C. Independent Claim 19

Similar to independent claim 19, independent claim 19 recites, *inter alia*, "two supporting rollers supported at least at times on said guide track." Accordingly, independent claim 19 is allowable over the prior art of record for at least the same reasons submitted above in connection with independent claim 10.

D. Independent Claim 28

Similar to independent claim 10, independent claim 28 recites "at least one supporting roller supporting said guide carriage on said guide track when said carriage is not fully suspended by said magnetic forces." Therefore, independent claim 28 is allowable for the same reasons that independent claim 10 is allowable.

E. Dependent Claims 14-18 and 20-27

Claims 14-18 and 20-27 depend, directly or indirectly, from allowable independent claim 10 and are therefore allowable therewith.

